

D E S C R I P T I O N

Random Access Computer Equipment, Model 3488-1, is a mass storage and retrieval unit for on-line operation in the 301 or 3301 System. Data is stored on 16" x 4½" magnetic cards which are removed from their magazines for read/write operations. The Model 3488-1 includes eight magazines with a total storage capacity of 340,787,200 alphanumeric characters. The Model 3488-2 Expansion Assembly allows an additional eight magazines to be added to the 3488-1, increasing the capacity to 681,574,400 characters. The 3488-1 is operated by the Processor through the Random Access Computer Equipment Channel. Up to four Model 3488-1's may be connected to the Channel and two Channels may be included in a 301 or 3301 System for a total system storage capacity of up to 5.45 billion characters.

Sub-Units

Card Selection Mechanism — Includes the selection rods, card bails and gripper assembly for the selection of the addressed magnetic cards.

Card Transport Mechanism — Provides the means for moving the selected magnetic cards to the read/write station and the return of the cards to the magazine. A dummy magazine position is provided at the end of the mechanism for the removal of cards.

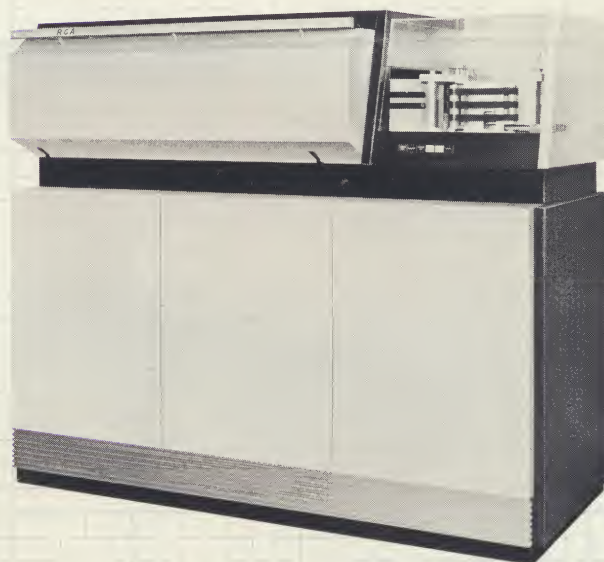
Magazines—Each magazine contains two decks of 128 uniquely addressed cards. Eight magazines are included with the Model 3488-1. The Model 3488-2 Expansion Assembly adds eight additional magazines to the Model 3488-1.

Read/Write Station—Consists of a revolving capstan, movable read/write head assembly and a recirculating gate. The head assembly which contains eight read/write heads can be moved to one of 16 positions.

Addressing and Timing Logic—Provides the electronic circuitry for the selection of cards and generation of checking signals to assure proper operation.

Power Supply—Furnishes the necessary power to all components at the proper voltage levels.

Random Access Computer Equipment

3488-1

- Provides on-line random access storage capacity from 340 million to 5.45 billion characters
- Operates with all 301 and 3301 System Processors
- Data transferred at the rate of 80,000 characters per second
- Fraction of a second access to any record in the file
- Data stored on 16" x 4½" magnetic cards
- Built-in verification of the selected magazine and magnetic card
- Eight magazine capacity of each Model 3488-1 field expandable to 16 magazines
- Pre-select feature reduces access time
- Read - after - write accuracy checking automatically performed



OPERATION

Controls and Indicators

Adequate controls and indicators are provided on the control panel for operating the unit.

Accuracy Control

Eight verification checks are automatically performed for each card addressed. Read-after-write parity checking is performed as each block is written. While reading, each character is checked for parity. Any single bit error in a specific character is automatically corrected.

SPECIFICATIONS

Storage Capacity

Card—Each magnetic card contains 166,400 (7-bit) characters
Magazine—Each magazine contains 256 magnetic cards—42.6 million characters
Eight Magazines (3488-1)—340,787,200 characters
Sixteen Magazines (3488-1 and 3488-2)—681,574,400 characters

Card Format

Recording Density—700 bits per inch
Bands—Each magnetic card contains 128 tracks divided into 64 addressable bands
Blocks—Each band (2 tracks) is divided into 4 blocks of 650 characters each
Transfer Rate—80,000 characters per second

Performance Timing

Card Select—170 milliseconds
Card Extract—55 milliseconds
Card Feed—Time is magazine dependent
Access Time (Average time including card select, card extract and card feed)

Magazine 1-8	Magazine 9-16
Number 1 = 290ms	Number 9 = 395ms
Number 5 = 330ms	Number 13 = 435ms
Number 8 = 360ms	Number 16 = 465ms

PHYSICAL CHARACTERISTICS

Over-all Dimensions (approximate)

Height 58¾ inches, width 74¼ inches, and depth 29½ inches.

Weight (approximate)

2200 pounds.

Color

The 3488-1 is available in the standard RCA color pattern of Shadow Blue (light blue) and Midnite Blue (dark blue).

OPERATING REQUIREMENTS

Power (approximate)

7.7 KVA a-c power at 120/208 volts $\pm 10\%$, 60 $\pm \frac{1}{2}$ cycles.

Average dissipated heat = 21,000 Btu/hr.

Cooling

Temperature: (Power-ON) 65-85F., (Power-OFF) 50-110F.

Humidity: (Power-ON) 20-65%, (Power-OFF) 0-80%.

Power ON or Power OFF conditions shall be maintained so that condensation does not form on the equipment.

Interconnection

Model 3488-1 to Model 3388-4 Channel—up to 100 feet of cable.

Model 3488-1 to Model 380-14 or 380-24 Channel—up to 100 feet of cable.

Note: Up to four Model 3488-1's may be connected to each Random Access Computer Equipment Channel, Models 3388-4, 380-14, or 380-24.

Specifications subject to change without notice.



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